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K–5 Principal Challenges Supporting Classroom Teachers in Emergency Distance Education

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This is to certify that the doctoral study by

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Walden University
2024

Abstract

K–5 Principal Challenges Supporting Classroom Teachers in Emergency Distance

Education

by

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MA, Argosy University, 2018

MA, University of Colorado at Colorado Springs, 2010

BS, University of Wyoming, 2006

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

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February 2024

Abstract

In 2020, the COVID-19 pandemic shut down schools and showed how unprepared school principals were for such a rapid pivot to online. According to recent studies, principals' roles were managerial rather than instructional, and the pivot away from the manager role toward instructional leaders, specifically related to technology, revealed many principals were unprepared to support teachers. Research has yet to establish the specific challenges related to technology implementation that occurred in this role shift for principals. The purpose of this basic qualitative study was to explore K–5 school principals' perceptions about the challenges they faced relating to technology leadership during the COVID-19 pandemic and what K–5 school principals suggest to improve technology leadership training and resources. This study was grounded in the crisis management lifecycle framework. Eleven U.S. K–5 school principals participated in semistructured, online interviews. The findings of this study showed that some participants were comfortable with basic technology skills, but many lacked a strong technology background. Participants who attended online college courses felt prepared as technology leaders; however, during the COVID-19 pandemic crisis of 2020, previous technology experience was a limited asset for supporting teachers through distance education. Also, it showed that participants' technology leadership expanded to technology distribution, problem-solving technology issues, helping teachers through distance education, and developing sustainable programs for distance learning. The findings could result in positive social change by helping to improve training and resources to build a foundation of technology leadership and crisis management for principals, who could then better lead the use of technology during a crisis and ensure the smooth functioning of education delivery.

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Dedication

I dedicate this doctoral study to my family—first, my two daughters, Caitlyn Mlodzik and Alyssa Blue. Through the many life experiences the girls and I have endured, they have been at the forefront of my drive to complete my educational journey. Their patience, support, and understanding made this dream possible. My parents, Ron Ciochetto and Priscilla Ciochetto, are proud of my accomplishments. They modeled the strong work ethic I used to move me to the finish line! I am blessed and proud to be Dr. Catherine Marie Mlodzik now!

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Chapter 1: Introduction to the Study

In 2020, the COVID-19 pandemic shut down schools and showed how unprepared school principals were for such a rapid pivot to online (DeMatthews et al., 2021; Francera et al., 2021). In this basic qualitative study, I explored K–5 school principals' perceptions of the challenges they faced during the pivot to online education during the COVID-19 pandemic of 2020 and their suggested improvements for the training and resources provided. This study may result in positive social change through helping U.S. school principals be better able to lead the use of technology during a crisis. In this chapter, I present the problem; purpose; research questions; and other introductory information for the study, including details like definitions and assumptions.

Background

Rapid technological advancements have changed traditional classroom education delivery to greater computerization with different learning opportunities for teachers and students (Esplin et al., 2018; Richardson et al., 2020). The changes in technology increased the expectations for principals in their technology leadership (Westberry, 2021). Principals need effective training to assist them and their teachers in the transition to remote teaching during public health emergencies (Esplin et al., 2018).

Before the pivot to emergency remote teaching during the COVID-19 pandemic, principals' roles were more managerial (LeChasseur et al., 2019) than instructional (Garcia et al., 2019). The pivot away from managers toward instructional leaders, specifically related to technology, made principals unprepared to support teachers (Azukas, 2022; Fancera et al., 2021). Esplin et al. (2018) and Vogel (2018) found that

principals' preparation programs do not adequately provide professional development to be technology leaders.

Principal technology leadership training prior to the COVID-19 pandemic did not adequately prepare administrators for the pandemic-related shutdowns (Azukas, 2022; Fancera et al., 2021). Technology leadership training before 2020 comprised educating new staff on how to use programs to gather data on student achievement, online instructional systems for student learning, and communication systems (Dandalt, 2021). Emergency preparedness during this period focused upon supporting students' social emotional needs (Huck & Zang, 2021). Scholars have found that traditional professional development does not provide specific enough technology leadership training (Tucker et al., 2021; Varela et al., 2020). For example, Lalani et al. (2021) stated that it is important to have targeted leadership development to increase digital educational technology. Further, Christensen et al. (2018) suggested that it is important to have innovative professional development for leaders to be successful. Therefore, principals need effective technology leadership training to fulfill their role as technology leaders (Esplin et al., 2018).

Problem Statement

While "principal leadership evaluation rubrics incorporated technology as a part of their effectiveness" (Zhang et al., 2019, p. 440), principals were not prepared for the pandemic and shutdowns (Azukas, 2022; Fancera et al., 2021). The goal of this study was to gain information on principals' perceptions of the challenges of leading teachers and the training and resources needed to lead teachers during the pivot to a virtual school

environment. The gap in practice was that principals were facing these challenges and did not have the necessary, prerequisite training and resources to overcome the challenges. To explore the gap between technology leadership during COVID-19 pandemic and the training and resources provided, I conducted a basic qualitative investigation with semistructured interviews of 11 K–5 school principals from the United States.

Purpose of the Study

The purpose of this basic qualitative study was to explore U.S. K–5 school principals' perceptions of the challenges they faced during the pivot to online education during the COVID-19 pandemic crisis of 2020 and suggested improvements to the training and resources provided. In 2020, the COVID-19 pandemic shut down schools and showed how unprepared school principals were for such a rapid pivot to online (DeMatthews et al., 2021; Francera et al., 2021).

Research Questions

Two research questions guided this qualitative study:

RQ1: What are K–5 school principals' perceptions about the challenges they faced relating to technology leadership during the COVID-19 pandemic crisis?

RQ2: What do K–5 school principals suggest for improving technology leadership training and resources?

Conceptual Framework

The conceptual framework for this study comprised Grissom and Condon's (2021) adapted crisis management lifecycle framework. In exploring crisis management, Gainey (2009) stated that organizations prepare for crises by handling and minimizing

damage to the organization, including stakeholders, during the crisis. Through the research of multiple researchers (e.g., Fink, 1986; Mitroff, 1988; Wooten & James, 2008), Grissom and Condon observed consistent themes across models and within the strategies with each associated phase. Grissom and Condon found that the five phases (i.e., mitigation and prevention, preparedness, response, recovery, and learning) of crisis management are cyclic and, therefore, proposed a crisis management lifecycle. I used Grissom and Condon's (2021) crisis management lifecycle to explore how the five phases of the lifecycle and their relation to addressing principal needs during a crisis applied to what U.S. K–5 principals required during the COVID-19 pandemic crisis to make the shift to a technology leader.

Nature of the Study

In this basic qualitative study, I conducted semistructured. one-on-one interviews over Zoom with 11 K–5 school principals in the United States to explore their perceptions about the challenges they faced relating to technology leadership during COVID-19 pandemic crisis. The qualitative method was appropriate because this study was focused on examining the perceptions of the 11 principal participants. Burkholder et al. (2019) stated that qualitative researchers try to understand individuals' viewpoints and subjective truth about something that is a known phenomenon. A basic qualitative study design was appropriate because the nature of this study was to explore principals' perceptions of the challenges, they faced during the pivot to online education during the COVID-19 pandemic crisis of 2020. Once data were collected, I analyzed the data by

following Saldana's (2021) suggestions regarding the development of coding, categories, and themes.

Definitions

Crisis management: The measures and steps taken to recognize, gain control, and control the damage to where it has limited damage (Canyon, 2020).

Distance learning: Education that takes place where the teacher and the student are physically separated (Keegan, 2006).

Emergency distance education: Education that takes place not in a traditional educational setting and can be in the form of synchronous or asynchronous learning (Pryor et al., 2020).

Technology leadership: Skills leaders need to integrate and support communicative and interactive technology (Okeke & Dike, 2019).

Assumptions

In qualitative studies, assumptions are the researcher's understanding of the meaning of an inquiry (Hatch, 2002). For this study, I assumed that the participants were truthful and honest in their responses. Truthful participant responses were imperative because they were the basis for the credibility of the participants in the study. Ravitch and Carl (2021) stated that the potential deception of participants threatens the validity of qualitative work.

Scope and Delimitations

The scope and delimitations in a qualitative study are factors that provide the parameters of a study (Bryant, 2003). The schools included in this study were elementary

schools, specifically those Grades K–5, from across the United States. Participants included current and past elementary school principals who experienced the COVID-19 pivot from 2019 to 2022. Although qualitative studies are not generalizable, there is potential for transferability of the study results with other U.S. elementary school principals who need information on leading the use of technology during a crisis.

Limitations

Research limitations may invoke a weakness that can affect the study results or the inferences drawn (Goes & Simon, 2018). The major limitation of this study could have been participant availability because the study population (i.e., school principals) is typically quite busy. However, I mitigated this limitation through ongoing, persistent recruitment tactics.

Significance

The findings from this study may benefit school principals in the future where they may be expected to lead with technology during a crisis or pivot in educational setting and meet the challenges and needs of students, parents, and staff. The gap in practice was that principals were facing these challenges and did not have the necessary, prerequisite training and resources to overcome the challenges. District administrators will benefit from the results of this study regarding how to support principals during a crisis. The original contribution of the study is a better understanding of principals' challenges and needs to lead the use of technology during a crisis. The positive social change that may occur through this study is that U.S. school principals could be better able to lead the use of technology during a crisis.

Summary

The problem addressed by this study was that U.S. K-5 school principals faced challenges relating to technology leadership during the COVID-19 pandemic crisis of 2020. In Chapter 1, I discussed the background, problem statement, purpose, research questions, conceptual framework, mature, definitions, assumptions, scope and delimitations, limitations, and significance. Chapter 2 will include an overview and synthesis of the current literature related to distance education and remote learning, technology leadership, leadership in a crisis, COVID-19 educational pivot, and professional development before concluding with a summary.

Chapter 2: Literature Review

The research problem prompting this basic qualitative study was that K–5 school principals faced challenges relating to technology leadership during the COVID-19 pandemic crisis of 2020. The purpose of this basic qualitative study was to explore K–5 school principals' perceptions of the challenges they faced during the pivot to online education during the COVID-19 pandemic and their suggestions for improvements to training and resources provided. I explored and summarized the research literature reviewed in this chapter using improvement science.

This chapter includes an introduction; explanation of the literature search strategy; discussion of the conceptual framework; and a review of the literature, focusing on scholarly articles published within the past 5 years on the concepts related to this study's research problem and purpose. The literature review has five main subsections: distance education and remote learning, technology leadership, leadership in a crisis, COVID-19 educational pivot, and professional development.

Literature Search Strategy

I searched several databases accessible through the Walden University Library to conduct this literature review, including Research Gate, SAGE Publishing, Google Scholar, and EBSCO. The peer-reviewed status of articles was verified through Ulrich's Periodicals Directory. The key search terms used were *technology leadership, principal leadership in technology, technology leadership during a crisis, technology leadership during COVID-19, technology integration, technology integration during a crisis, instructional leadership for technology, distance education, remote education, remote*

learning opportunities, and professional development for technology leadership, and *principal experiences during a crisis.* All sources included in the literature review were published between 2018 and 2023 in peer-reviewed journals.

<div align="center">**Conceptual Framework**</div>

I used the crisis management lifecycle as the conceptual framework for this study. The application of this framework supported this study because the crisis management lifecycle is used to decompose the phases an organization goes through during a crisis. The crisis management lifecycle provided me with a guide to explore U.S. K–5 school principals' perceptions of the challenges they faced during the pivot to online education during the COVID-19 pandemic of 2020 and their suggested improvements to training and resources provided.

Crisis Management Lifecycle

The conceptual framework of the crisis management lifecycle refers to a process of measures and steps taken (Canyon, 2020) to prepare (Grissom & Condon, 2021) or handle a sudden or evolving change in an organization during a crisis (Luecke & Barton, 2004). In a crisis, recognizing an urgent problem, initiating preventive measures (Fink, 1986), providing immediate support, and minimizing organizational damage (Grissom & Condon, 2021) changes slightly dependent on the crisis. In the book, *Crisis Management: Planning for the Inevitable*, Fink (1986) described a four-stage crisis management model of crisis management that consisted of a prodromal stage, an acute stage, a chronic stage, and a resolution stage.

Mitroff (1988) built on Fink's research and declared that there were five phases of crisis management: signal detection, probing, containment, recovery, and learning. Riggio and Newstead (2022) consider Mitroff, the father of crisis management, and many other researchers have used Mitroff's work as a foundation. Mitroff (2015) stated that preparation is the best approach to manage a crisis. As crisis management research continued, the stages or steps that crisis management models mostly added to the descriptors versus making a change to Fink's original research.

Wooten and James (2008) added to Mitroff's 1998 crisis management model, stating that the organizational leaders who lead the crisis may need proper training to do so. They also found in their research that Mitroff's model needed to consider what competencies leaders need to be able to work through crisis management. Wooten and James stated that each of the five phases of Mitroff's model has competencies that leaders need to manage a crisis. For example, during the signal detection phase, the competencies of sense-making of the crisis and perspective taking, or empathy for others during a crisis, are needed (Wooten & James, 2008).

As crises have evolved, Grissom and Condon (2021) proposed that crisis management is a lifecycle and there is the need for specific strategies in preparing educational organizations for crisis management. Grissom and Condon adapted past research on crisis leadership and applied their research to educational organizations. Specifically, they synthesized research on principals and their reactions to managing the following crises: the September 11, 2001 terrorist attacks, Hurricane Katrina, natural disasters, and school shootings. Grissom and Condon's synthesis of the work of past

crisis management researchers led to their adaptation and development of the five phases of a crisis management lifecycle for schools: (a) mitigation and prevention, (b) preparedness, (c) response, (d) recovery, and (e) learning. In the mitigation and prevention phase, Grissom and Condon stated that principals should assess for risks and weaknesses to be prepared for a crisis. For example, principals can create a team and ask broad and probing questions to assess threats in existing systems, policies, and susceptibility to the school (Grissom & Condon, 2021) to determine early recognition of crises (McLeod & Dusky, 2021) or have teams participate in a risk assessment process and use the data to better prepare for a crisis (Fein et al., 2008). The mitigation and prevention phase are comparable to Mitroff's signal detection phase. After the mitigation and prevention phase, Grissom and Condon proposed there is a preparedness phase. Preparedness means moving to well-prepared plans that include logistics, training, communication, and having assigned roles (Bishop et al., 2015; Gainey, 2009), and strategic planning that engages all staff to respond to a crisis (James & Wooten, 2005). The next lifecycle phase is the response phase, which refers to the swift actions principals must make to respond to and contain the crisis to reduce a negative impact (Bishop et al., 2015; Grissom & Condon, 2021). The fourth phase in the crisis management lifecycle is the recovery phase, which moves leaders from an acute event to a sustained response to begin recovery (Grissom & Condon, 2021). The fifth phase is the learning phase that comprises the intentional learning and reflection that must take place to better prepare for a crisis. McLeod and Dulsky (2021) stated that most school leaders need more training in crisis leadership. Grissom and Condon's crisis management lifecycle provides a model

for principals to use to actively prepare for a crisis actively. Figure 1 visually represents Grissom and Condon's (2021) adaptation of the crisis management lifecycle.

Figure 1

Crisis Management Lifecycle in Schools and Districts

Pre-Crisis

TRIGGERING EVENT

Mitigation & Prevention → Preparedness

Response

During Crisis

Post-Crisis

Learning ← Recovery

Adapted from Wooten & James 2008

Note. Grissom and Condon (2021) adaptation from Wooten and James (2008) by Grissom, J. A., & Condon, L. (2021). Leading schools and districts in times of crisis. *Educational Researcher*, *50*(5), 315–324. (https://doi.org/10.3102/0013189X211023112)

Summary

Grissom and Condon's (2021) crisis management lifecycle was appropriate to use as the conceptual framework for this study because it builds off past crisis management models and can be used within the environment of schools and districts. The five phases—mitigation and prevention, preparedness, response, recovery, and learning—provided a foundation for this exploration of the challenges U.S. principals faced in the pivot to online education during the COVID-19 pandemic crisis of 2020.

Literature Review Related to Key Concepts

The literature review yielded five essential themes: distance education and remote learning, technology leadership, leadership in a crisis, and the COVID-19 pandemic crisis of 2020 pivot, and further explaining what is known and not known. This literature review includes 51 highly relevant, peer-reviewed sources published from 2018–2023.

Distance Education and Remote Learning

As COVID-19 forced school closures, principals' compliance with the U.S. requirements for emergency preparedness (Reynolds et al., 2021) and the plans for delivering educational learning (Brock et al., 2021) suddenly changed from classroom learning to an evolving shift to online learning (Richardson et al., 2020). Due to the COVID-19 global pandemic, districts struggled with enacting mandates for distance learning (Peterson et al., 2020). These physical closures caused educational leaders to move to an online learning system (Brock et al., 2021). Although online learning systems are not a new phenomenon, the closures posed instructional experience concerns (Brock et al., 2021) with distance learning, the overall lack of preparedness (DeMatthews et al., 2021), a change in educational practices (Trust & Whalen, 2021b), and unanticipated challenges (Lindel, 2020). Esplin et al. (2018) stated that technology was increasingly more essential, and digital competencies were necessary. With the increased need for digital competencies because of the COVID-19 forced closure of schools, principals were unprepared to transition so quickly to distance learning (DeMatthews et al., 2021).

Greener (2021) stated that there are layers in the meaning associated with the terms distance learning, online learning, or blended learning. Singh (2019) stated that

terms vary and have overlapping meanings. For example, a researcher may see online learning called e-learning or blended learning (Singh, 2019). Therefore, the term online learning could encompass all the overlapping terms above, but a dedicated term may vary based on the school district or school site. Singh and Thurman (2019) stated that distance education is a learning experience outside the classroom and school building.

The COVID-19 pandemic forced principals and teachers to work and deliver instruction online (Azukas, 2022; Owens & Hudson, 2020). This sudden shift left principals unprepared, district-level administration did not provide clear directions (Fancera & Saperstein, 2021), and there were numerous challenges (Jackson et al., 2022) regarding how to deliver instruction in an online environment or virtual environments (Azukas, 2022). With instruction moving to an online or virtual environment, instructional supervision was more complex (Brock et al., 2021) and carried a significant burden (DeMatthews et al., 2021). The complexity of the change to delivering instruction in an online or virtual environment left principals reporting the need for more planning, preparation, and resources to deal with this shift (DeMatthews et al., 2021).

The physical closure of schools during the COVID-19 pandemic posed critical issues for principals in their instructional leadership roles (Brock et al., 2021). As principals dealt with the COVID-19 pandemic, there was a move from suggesting technology be used in instruction now to administrators pressuring technology implementation (Gonzales & Jackson, 2021). Brook et al. (2021) stated that it was an unprecedented time, and during the COVID-19 pandemic, online instruction provided challenges for principals. The sheer number of hours principals, teachers, and students

would spend online daily or weekly outweighed the time and effort put into technology for instruction (Garcia et al., 2019). Researchers stated that during the COVID-19 pandemic, principals shifted from site-based instructional leaders to adding technology leadership to their role.

Technology Leadership

Principal leadership has changed. In the past, principal leadership included basic and average administrative tasks; however, it shifted to a role where technology leadership was a crucial expectation (Garcia et al., 2019; Karakose et al., 2021). As technology has become more centralized and at the forefront of education, school principals are charged with setting a clear vision of integrating technology (Christensen et al., 2018) and are quickly expected to understand technology (Garcia, 2019) to navigate the digital environment (Richardson et al., 2018; Sheppard et al., 2018). Technology's role has changed the expectations of principals' leadership (Richardson et al., 2018).

As technology in education has rapidly changed its function in education, the role of principals has expanded to one of more preparedness (Esplin et al., 2018) to lead their schools and teachers as technology leaders in the school and conduct school virtually (Westberry et al., 2021). Principals have reported that this shift has left them unprepared (Azukas, 2020; Fanera et al., 2021), and at times, without the confidence to lead in a digital environment (Esplin et al., 2018; Sheppard et al., 2018). Although Varela et al. (2020) showed that principals were generally confident in serving in this new role, Westburry et al. (2021) stated that even principals' evolvled technology leadership abilities did not prepare them for the multiple roles they now serve. Principals'

technology leadership abilities encompass and are the cornerstone to teacher technology instruction (Gonzales, 2020).

As technology leadership shifts from primarily administrative tasks (Garcia et al., 2019; Karakose et al., 2021), it has become integral in the change of instructional practices (Garcia et al., 2019), which leads the schools' performance (Jackson et al., 2021). Honig (2019) stated that principal leadership takes on more teaching and learning as their role. As principals are the driving force for instructional practice (Garcia 2019), they must understand their role as technology leaders and what it entails to influence instructional teaching and learning (Richardson et al., 2018). Understanding their role allows for recognizing effective instruction in an in-person setting or virtual (Shepherd et al., 2018). Therefore, leadership training is necessary (Azukas, 2022) if principals are not trained or feel unprepared (Gonzales, 2020). It is crucial that principals are well trained in going beyond general technology use and move towards evaluating technologies (Garcia et al., 2019), integrating technology (Edelber, 2020; Sheninger, 2019), and monitoring for academic success (Dexter et al., 2019).

Leadership in a Crisis

Principals are at the front lines when navigating a crisis (Sterrett & Richardson, 2023). Karasavidou and Alexopoulos (2019) defined a *crisis* as an urgency that demands immediate action by a leader. Fullan (2014) stated that numerous crises principals have endured have made their job more challenging. Over the past several years, principals have shifted from more of a management role (Sterrett & Richardson, 2023) to an instructional leader role (Garcia et al., 2019) to the role of crisis leadership (Striepe &

Cunningham, 2021) as more crises have occurred. There is a strong likelihood that schools will face other crises (Striepe & Cunningham, 2021), and principals will face increased expectations (Francera & Saperstein, 2021). This will, in turn, put more demands on them to be innovative in leading a school through a crisis (Sterrett & Richardson, 2023).

Previously, a crisis in education has included but is not limited to school shootings, social unrest, bomb threats, teacher strikes, and natural disasters (Hayes & Derrington, 2023; Striepe & Cunningham, 2021). Therefore, a crisis can entail more incidents because a crisis is urgent and demands immediate action (Karasavidou & Alexopoulos, 2019). For example, in the disruption of the educational setting due to unforeseen crises of community fires and the displacement of stakeholder families (Mutch, 2015). Moreover, researchers have stated that having a crisis plan is ideal; it may not be a catch-all for all crises (Urick et al., 2021).

In late 2020, crisis management changed to address something principals were unprepared for (Sterrett & Richardson, 2020a) that during the COVID-19 pandemic crisis of 2020 closed school worldwide. Principals had no training to handle a pandemic (McLeod & Dulsky, 2021). When schools ceased in-person learning and switched to remote learning (Grissom & Condon, 2021), new safety protocols before closures and returning to in-building learning posed stressors for principals (Urick et al., 2021) in leading a school in a time of crisis (Grissom & Condon, 2021). Grissom and Condon's (2021) study discussed their adaptation to the crisis management lifecycle in schools and

districts to support how principals identify the skills they need to handle a crisis like the COVID-19 pandemic crisis of 2020.

Grissom and Condon (2021) synthesized research on principals' reactions and management of the following crises: September 11, 2001, terrorist attacks; Hurricane Katrina, natural disasters, and school shootings. The COVID-19 pandemic crisis of 2020 was unlike the aforementioned crises and brought a new perspective of crisis management needed to address concerns (Grissom & Condon, 2021; Urick et al., 2021). Grissom and Condon's synthesis of the research of principal responses to crises built five phases of a crisis management life cycle for schools.

In the Fall of 2019, an unprecedented crisis began to spread rapidly across the globe (McLeod & Dulsky, 2021). By February 2020, the unprecedented crisis was named the COVID-19 pandemic crisis of 2020. This global Pandemic caused schools and school systems to be off guard (McLeod & Dulsky, 2021), and schools began preparing for school shutdowns that disrupted student education (Morgan, 2020). This disruption caused principals to adjust how they navigated support for teachers and students (Kaden, 2020). The pandemic crisis propelled principals into reinventing their school leadership and moving to more of on that grows to one of a technology leadership (Richardson et al., 2021c; Sterrett & Richardson, 2020a, 2020b). The COVID-19 pandemic crisis was not a typical crisis. The extraordinary challenges of the COVID-19 pandemic crisis (Bagwell, 2020) had principals face adopting new technologies and technology skills (Kaden, 2020) in order to build a technology-rich culture (Sterrett & Richardson, 2023) which changed

their leadership role (Sterrett & Richardson, 2020b) from one of a manager to instructional and technology leader (LeChasseur et al., 2019)

Leadership in a Crisis: COVID-19 Leadership Pivot

Sterrett and Richardson (2023) stated that being an innovative leader is now essential to lead a school successfully through a crisis. The COVID-19 Pandemic crisis of 2020 began in the Spring of 2020 (Bagwell, 2020), and the disruption soon caused principals to adjust how they navigated support for teachers and students (Kaden, 2020). Unlike previous crises, the COVID-19 crisis pandemic of 2020 forced principals into reinventing their leadership (Richardson et al., 2021c; Sterrett & Richardson, 2020a, 2020b). The closure meant a move to digital learning would be present due to schools closing (Sterrett & Richardson, 2020a) and learning remotely or through distance education. Sterrett and Richardson (2023) stated that digital leadership is the new norm.

As the COVID-19 pandemic crisis of 2020 spread worldwide from in-person learning to remote teaching exposed principals to a significant gap in preparation (Trust & Whalen, 2020a) for an emergency closure of public schools. The COVID-19 pandemic crisis of 2020 shocked the education world (Hodges et al., 2020, para. 5) and principals rapidly had to become technology leaders (Esplin et al., 2018) to drive the changes (Garcia et al., 2019) for remote teaching in an emergency (Hodges et al., 2020). Richardson et al. (2020) expressed that principals had to scramble to provide resources and tools, but the sudden pivot to prepare themselves, staff, and students proved to be a challenge.

Summary and Conclusions

The major themes in the literature were discussed in relation to the key concepts of the challenges principals faced during the pivot to online education during the COVID-19 pandemic crisis of 2020 of distance education and remote learning, technology leadership, and leadership in a crisis. Keegan (2006) stated that distance education is where students and teachers are separated. Okeke and Dike (2019) discussed that principals' skills must integrate and support communicative and interactive technology. The COVID-19 pandemic crisis of 2020 pivot left principals unprepared to transition so quickly to distance education (DeMatthews et al., 2021), and the increased expectation of technology leadership (Westberry, 2021) became critical.

What is Known

What is known through the researchers Willson (2021) and Varela and Fedvnich (2020) agreed that there was a lack of procedural guidelines to address challenges caused by the pivot made during the COVID-19 pandemic crisis of 2020 that challenged principals during this time. In contrast, Varela and Fedynich's research stated that principals were confident in their preparedness to support staff, students, and parents during the COVID-19 pandemic crisis of 2020. Conversely, much of the research literature supports that principals were unprepared to manage the COVID-19 pandemic crisis (DeMatthews et al., 2021; Francera & Saperstein, 2021) as technology leaders.

What is known from McLeod and Dulsky (2021) research found that the COVID-19 pandemic crisis of 2020 was unlike other crises. Principals needed to improve in preparation for handling the COVID-19 pandemic crisis (Richardson et al., 2020) when

the pivot to distance or remote learning became a part of learning with technology.

Turgut et al. (2021) disagreed and stated that their research revealed that the perception

of principals' technology abilities was adequate. Fancera and Saperstein (2021) reported

that part of the issue was the need for more support from the administration.)

What is not Known

What is not known is what principals' perceptions are of the challenges faced due

to the COVID-19 pandemic crisis of 2020 when leading teachers through alternate

teaching approaches in a virtual instructional setting (Pressley, 2021) and how technology

leadership would be a part of effectively leading schools in teaching and learning (Esplin

et al., 2018). Further, LeChasseur et al. (2019) cited that district offices tend to have a

top-down directive with principal leadership. Jackson et al. (2021) stated that the

principal capabilities of the management for required tasks were a challenge to balance

instructional leadership, and Lalani et al. (2021) cited the confusion between technology

and leadership. Grissom and Condon (2021) stated that principals need development

opportunities. However, the first and second-order barriers (Okeke & Dike, 2019) would

play a part in the challenges the principals experienced during the COVID-19 pandemic

crisis of 2020. These perceptions and experiences are valuable in technology leadership

of a pivot in the learning environment (Lalani et al., 2021).

In Chapter 3, I go into detail about the research design and method, including the

process for participant selection of participants, instrumentation, procedures, and the data

analysis. Further, in Chapter 3, a discussion, in detail, the trustworthiness, credibility,

transferability, dependability, and the confirmability. Also, a discussion about ethical

procedures. Lastly, a final summary about the information discussed in Chapter 3 to

complete the chapter.

Chapter 3: Research Design

The purpose of this basic qualitative study was to explore 11 U.S. K–5 school principals' perceptions of the challenges they faced during the pivot to online education during the COVID-19 pandemic crisis of 2020 and their suggested improvements to training and resources provided. This chapter includes a presentation of the research design, rationale, and the role of the researcher. I also discuss the study's chosen methodology, instrumentation, participant recruitment, data analysis plan, trustworthiness, and the ethical procedures.

Research Design and Rationale

In this study, I explored U.S. K–5 school principals' perceptions about the challenges they faced relating to technology leadership during the COVID-19 pandemic crisis of 2020. Burkholder et al. (2019) and Merriam and Tisdell (2016) stated that qualitative researchers explore participants' perspectives on a specific topic. The main goal of qualitative research is to study, uncover, and interpret meanings (Merriam & Tisdell, 2016). Furthermore, Burkholder et al. stated that the basic qualitative design is used when the researcher wants to investigate how participants seek to understand their lived experiences and the meaning that comes from their experiences. This study explored 11 participants' perspectives on a specific topic; therefore, a basic qualitative study design was appropriate.

Other qualitative designs that could have been used but were not chosen for this study were ethnography, grounded theory, a narrative study, and phenomenology. An ethnography focuses on studying a cultural group, which is different from the focus of the

current study (see Merriam & Tisdell, 2016, p.229). In a grounded theory study, the

researcher uses data to generate theories while using a comparative analysis (Ravitch &

Carl, 2016, p. 221). The grounded theory design is used with the aim of generating a

theory based off data; however, in this study I used basic qualitative research methods to

collect interview data to uncover and interpret meaning, and so the grounded theory

design was not suitable. A narrative study is used to examine how stories are told to

understand the participants' perceptions in making sense of their experiences

(Ollerenshow & Creswell, 2002). In the current study, I did not examine stories;

therefore, a narrative design was not appropriate for this study. I considered conducting a

phenomenological study because Ravitch and Carol (2021) explained that this type of

study is used to examine themes and patterns of participants over a period within a

population. However, the goal of the current study was to interpret the meaning of people

(see Merriam & Tisdell, 2016, pp. 24-25); therefore, the phenomenological design was

not suitable to accomplish this goal. Burkholder et al. (2019) stated that basic qualitative

researchers try to understand individuals' viewpoints and the subjective truth about

something that is a known phenomenon, which best aligned with the goal of the current

study.

In quantitative research, a researcher tests a hypothesis, evaluates data, and tests

for significance (Creswell, 2015, pp. 16–17). Burkholder et al. (2019) stated that a

quantitative study is a controlled experimentation with one measurable and quantifiable

truth as a result. The results of the current study were dependent on the participants'

experiences, resulting in a basic qualitative study being the most appropriate research method and design.

Role of the Researcher

My role as a researcher in this study included conducting participant interviews. Ravitch and Carl (2021) stated that scripted research questions should be created and approved prior to the start of the study. The interviews were recorded, transcribed, and later coded for analysis. I explained my role to the study participants because I was a teacher with a principal license, conducting interviews for this basic qualitative research study. I had no prior interactions with participants for this study and did not have any personal or professional relationships with them in any capacity, including supervisory or instructor. I held no biases or power relationships and had no ethical issues. Moreover, to address any concerns, an interview protocol was used, and participants were notified that this study was not dependent on individual participant responses.

Methodology

The study design elements for this basic qualitative study included the participant selection, instrumentation, and recruitment and data collection procedures. Upon completion of data collection, I began analysis with open coding to categorize the codes. I interpreted those results to identify the themes. This section also includes an explanation of the processes for coding and analyzing data and the methods to ensure trustworthiness, including the ethical approach taken in the study.

Participant Selection

The 11 participants in this study were principals selected from K–5 elementary schools across the United States. Burkholder et al. (2019) and Merriam et al. (2016) stated that a sample size of eight to 10 participants is appropriate in a basic qualitative study when a group of participants has similar areas of expertise needed for a study. The criterion for participation included being a current and former principal who worked as a principal in a U.S. K–5 school during the COVID-19 pandemic crisis of 2020.

For this study, I used the purposive sampling strategy. Purposive sampling dictates that the selection of participants is based on the judgement of the researcher on which participants are the most informative to the study (Moses & Korstjens, 2018). I recruited participants through administration and leadership social media platforms (e.g., Facebook and Instagram) and Walden University's participant pool.

The deliberativeness of sampling in qualitative research lends to purposive sampling in combination with snowball sampling (Moses & Korstjens, 2018). Snowball sampling is the selection of further participants through the referral of current participants, thus growing the sample size (Cohen & Arieli, 2011; Moses & Korstjens, 2018). For example, at the end of an interview, the researcher can ask the participant if they have any recommendations for anyone with similar qualifications. Cohen and Arieli (2011) stated that snowball sampling is appropriate when researching populations that are difficult to obtain a representative sample of. At the end of each interview, I asked the participant if they knew of any individuals who met the participant inclusion criteria.

Instrumentation

The interviews directly followed to the interview question protocol (see Appendix). The interviews began with an introduction of myself and the study. Rubin and Rubin (2012) suggested that interviews should not begin with harder questions but instead should start with easy questions before moving to the harder ones. For example, my first interview question was: How do principals describe the challenges of leading teachers in emergency distance education?

I created the interview questions for this study to obtain rich responses from the participants. Follow-up questions were asked if there was a need to gain further understanding from the participants. Rubin and Rubin (2012) recommended using probes during the interview.

Procedures for Recruitment, Participation, and Data Collection

I used several different sources to contact potential participants: social media (e.g., Facebook and Instagram), Walden University's participant pool, and principal administrator organizations. I posted electronic flyers on social media and in principal administrator organizations websites. Once participants showed interest, I emailed them back to confirm their eligibility and schedule an appointment for an interview. Finally, I employed snowball sampling by asking at the end of each interview if the participant could recommend anyone who had experience with the research problem under study.

After prospective participants agreed to take part in the study, I emailed them an informed consent form. Interested participants had to reply with "I consent" to show their consent before I collected any data from them. Participants were reminded that they could

leave the study at any time without fear of reprisal. I audio recorded the semistructured, one-on-one, Zoom interviews on a digital audio device. The interviews were scheduled for an average of 30 minutes. Upon completion of the interviews, I emailed a transcript of their interview to each participant for their review.

Discrepant Cases

Erickson (2012) noted that a discrepant case is an atypical case that still needs to be closely looked at as part of the larger analysis. There were no discrepant cases in this study, which could be the result of a small, focused participant sample.

Data Analysis Plan

Data analysis is when qualitative researchers gather information, transcribe it, and use a coding process (Ravitch & Carl, 2021). The research questions guided this exploration of U.S. K–5 school principals' perceptions of the challenges they faced during the pivot to online education during the COVID-19 pandemic crisis of 2020. I created the interview questions for this study (see Appendix) to elicit responses from participants that answered the research questions.

Saldana (2021) stated that codes are ways to discover categories through identification and labeling from qualitative interviews. Coding methods begin with reviewing data through inductive coding (Saldana, 2021). Inductive coding is when the researcher starts with no particular codes and codes emerge from the research (Saldana, 2021). My data analysis plan was to begin with open coding after participants reviewed the completed transcripts for accuracy. Once I completed the cycles of open coding, I

then categorized the data before identifying themes that connected the data to the research questions. Microsoft Excel was used to organize the data.

Trustworthiness

Credibility

The credibility of a basic qualitative study is established to ensure that the data collected are in tandem with the research question being answered (Burkholder et al., 2020). Korstjens and Moser (2018) defined credibility as confidence in truthful research findings. The establishment of credibility supports if the research findings are plausible and interpreted correctly when taken from the participant (Korstjens & Moser, 2018). To ensure credibility, I adopted the steps described by Korstjens and Moser: (a) I maintained prolonged engagement with the participants through interviews, (b) I engaged the participants in transcript review by sending transcripts of the interview to the participants to ensure they are accurate, and (c) I sent a list of final themes to the participants for their comments. By employing this data collection and coding process, I strictly adhered to the standards set by Walden University. Burkholder et al. (2019) and Ravitch and Carl (2021) stated that establishing credibility ensures a level of saturation and reflexivity.

Transferability

Transferability is defined as the "degree results from qualitative research transfer to other contexts or settings" (Korsjens & Moses. 2018, p. 121). For transferability, Korsjens and Moses (2018) stated that the description of the research process needs to be a complete description where the participant can make their judgment and transfer it to their own setting. To ensure transferability, I followed the suggestion of Korsjens and

Moses and provided a thick description. In communicating with the participants, a complete description of the study context was given to support their understanding, allowing for the opportunity to make the context transferable to their own settings (i.e., a deep account of the research process was provided for transferability). For example, the deep account includes the data, the study's conduction, the study itself, the setting of the study, sample information, the study's demographics, study criteria, and interview procedures and questions (Korsjens & Moses. 2018).

Dependability

To ensure the achievement of dependability, I followed Korsjens and Moses's (2018) recommendation of providing an audit trial. An audit trail is a full disclosure describing the research steps that the researcher took from the beginning of a research project through reporting the findings (Korsjens & Moses, 2018). I kept records of the research path throughout the study, describing the research steps from the start of the research project in developing and reporting the findings (i.e., I kept a thorough record of all the steps taken during the project). To ensure dependability, I also kept a diary throughout the process of the study in which I tracked and examined areas of the study and how the data affected the research decisions made. For example, the diary held how I planned to analyze my own conceptual beliefs, examine assumptions, and analyze preconceptions and values.

Confirmability

Korsjens and Moses (2018) stated that confirmability refers to how research findings can be confirmed. Confirmability correlates establishing data, the data

interpretation, and the interpretations of the research findings (Korsjens & Moses, 2018). To ensure confirmability, I kept an audit trail as described above.

Ethical Procedures

I received approval to conduct this study from the Walden University Institutional Review Board (IRB). Additionally, each participant was presented with an informed consent form before interviews began. The informed consent form provided participants with a detailed account of the purpose of the study and interview process. Participants were also informed that they could withdraw themselves from the study at any time. Burkholder et al. (2019) stated that the informed consent process informs participants about potential risks that may come to them. To maintain the participants' confidentiality, I gave them pseudonyms to protect their identities. I audio recorded the interviews and will keep the information secure for 5 years on a personal computer that is password protected.

Summary

In Chapter 3, I presented the research methodology, the research design and rationale, the role of the researcher, the data collection methodology and processes, trustworthiness, and ethical procedures. In this basic qualitative study, I used purposive and snowball sampling to recruit the participants. I utilized ethical procedures and established trustworthiness for this study. In Chapter 4, I will discuss the data collected, data analysis process, the results, and evidence of trustworthiness.

Chapter 4: Results

The purpose of this basic qualitative study was to explore U.S. K–5 school principals' perceptions of the challenges they faced during the pivot to online education during the COVID-19 pandemic of 2020 and their suggested improvements to training and resources provided. The research questions that guided this study were:

RQ1: What are K–5 school principals' perceptions about the challenges they faced relating technology leadership during COVID-19 pandemic crisis of 2020?

RQ2: What do K-5 school principals suggest for improving technology leadership training and resources?

Chapter 4 begins with a brief review of the purpose and research questions. I also describe the study setting; data collection and analysis processes, including the participants, how data were recorded, data collection process, and analysis method; the results; and the evidence of trustworthiness.

Setting

I conducted this basic qualitative study with 11 elementary school principals from across the United States who worked during the COVID-19 pandemic crisis of 2020. I recruited these participants through principal administrative organizations, online doctoral organizations, Walden University social media groups, and over 350 direct emails to principals through district email accounts. As participants responded with their intent to participate in the study, I emailed them the interview consent form and asked them to email back with the following response: "I consent to participate in the study." Then, participants selected a day and time to schedule their Zoom interview, and an

invitation was emailed back to the participant. During this study, I identified no significant personal or organizational conditions that directly affected the participants or their experiences.

Data Collection

After receiving IRB approval from Walden University (IRB Approval No. 09-06-23-1008512), I began the study by holding semistructured interviews with a purposive sample of 11 U.S. K–5 elementary school principals who worked during the COVID-19 pandemic crisis of 2020. To recruit participants, an informational flyer about the study asking for participants who were former or current U.S. K–5 elementary principals who worked during the COVID-19 pandemic crisis of 2020 was posted in administration and leadership groups on social media platforms (e.g., Facebook and Instagram). Then, through district public websites, I obtained the email addresses of 350 U.S. K–5 school principals and emailed all 350 of them with an introduction to the study and an informed consent form. The population I drew from was across the U.S. K–5 school principal pool and did not require an approval letter from a research site. From the initial social media platform requests, I received six participants who met the inclusion criteria. After emailing the district-provided email addresses of 350 U.S. K–5 principals, I received an additional four interested participants. Those principals who agreed to take part in the study replied to my email request with "I consent." Through the recruiting process, 11 participants came forward, and seven more expressed interest from other platforms; however, these seven individuals later declined to take part in the study.

After the 11 principals confirmed their interest, each participant selected a day and time that worked best for them to be interviewed for the study. All participants were interviewed virtually in the confines of a locked home office. The Zoom interviews for the 11 participants took place over 5 weeks. Due to the participant pool being open to all U.S. K–5 principals, scheduling and accommodating their availability across time zones and work schedules caused three principals to reschedule their interviews. The interviews varied in length and averaged around 30 minutes. However, there were two participants who needed a little more than 30 minutes to share their experience.

I began the participant interviews with a message of appreciation and a reminder of the study's purpose. The informed consent form was reviewed, and I asked if the participants had any questions before I began asking the interview questions. I also told the participants that no answer would be considered right or wrong and that they could only continue the interview if they felt comfortable. As the interviews progressed, I included a purposeful reminder that each participant's responses and information would be kept confidential, including coding each participant and their responses. During the interview process, a reminder was also given to the participants to withhold from using their names, colleagues' names, or identifying their place of employment during the interview. Lastly, the participants were reassured that their responses would provide valuable insight into their experiences during the COVID-19 pandemic crisis of 2020. At the end of the interviews, if the participant used a name, I amended the transcript and did not include the name or identity in the interview transcript.

During the interviews, any verbal communication cues the participant provided were included in my notes. Keeping notes supported my engagement in a deep reflection of the interviews. In turn, this reflection reinforced that my biases and feelings would not impact the data. Taking notes allowed me to stay focused on the research interview questions to better analyze the data.

The participants in this study were interviewed via Zoom. Through Zoom, I selected the audio transcription feature that transcribed each interview word-for-word. I reviewed the transcription within 2 days of transcribing the participant interviews, which provided me with an early look into analyzing the data. After completing the transcription, a copy was shared with the participants so they could review the transcript. I asked participants to add any edits or ask any questions they may have and contact me via my Walden University email address to state if they needed to discuss edits or if there were no edits, to state that no changes were needed. As required by the Walden University IRB, all interview transcriptions will be stored on a password-protected computer for 5 years. After 5 years, all papers and research data will be shredded and removed from the password-protected computer.

Data Analysis

After receiving Walden University IRB approval to conduct the study, I began participant recruitment through principal administrative organizations, online doctoral organizations, Walden University social media groups, and over 350 direct emails to principals through their district email accounts to find participants who met the criteria of working as a principal in U.S. K–5 schools during the COVID-19 pandemic crisis of

2020. Participants were emailed the informed consent form for the study and an interview day and time with a corresponding Zoom link. After each interview, the Zoom transcription allowed me to analyze the participant's responses.

The interview questions for this study were created to elicit a response from the participants to answer the research questions. Using Saldana's (2021) coding procedures, I shifted between each of the stages of data analysis. To begin with, I used open coding after the participants reviewed the completed transcripts for accuracy. Multiple cycles of open coding led me to narrow the coding of categories and themes analytically. Next, I categorized the data and identified the themes connecting the data to the research questions. Transcriptions were manually highlighted and directed qualitative analysis through coding by categories, including subcategories. Through this process, the data led to pinpointed codes, categories, and themes. Ravitch and Carl (2016) stated that themes would emerge from merging codes, discarding them, and making connections between them. The following finalized themes aligned with the research questions: technology comfort and fears, experiences, challenges in technology leadership, challenges in leading teachers, distance learning, adaptation, technology leadership, training, and resources.

Discrepant Cases

Through the interview process, I found no participant responses that competed with or challenged any other responses from participants. As the major themes were identified, I found no discrepant cases that would have conflicted with the research questions in this study.

Results

This section includes a discussion of the results in relation to each research question.

The data for this study were collected through semistructured interviews with 11 U.S. K–5 school principals who worked during the COVID-19 pandemic crisis of 2020. I offered participants the option of being interviewed through a Zoom meeting or a phone call. All participants chose to be interviewed through an audio-recorded Zoom conference call. Interviews were transcribed, and each transcription was further broken into categories in Microsoft Excel. I reviewed each interview transcript to ensure its accuracy and amended them if needed to maintain participant confidentiality. Participants were emailed a copy of their interview transcript within 48 hours of their interview for their review. After each participant confirmed the accuracy of the transcripts, I organized the collected data in Microsoft Excel into categories to determine the major themes.

In the following subsections, I discuss the resulting themes that emerged from participants' interview responses. Each theme is described and supported by participant quotes. The participants' contrasting viewpoints are also presented.

Principals' Perceptions About Technology Leadership Challenges

Through the review of the participants' transcripts, I found that the principals' perceptions about technology leadership challenges included the following themes: (a) principals' technology comfort level and fears, (b) challenges of technology leadership during the COVID-19 pandemic crisis, (c) challenges in leading teachers during the COVID-19 pandemic crisis, and (d) distance education.

Theme 1: Principals' Technology Comfort Level and Fears

LeChasseur et al. (2019) stated that before the COVID-19 pandemic crisis and the pivot to emergency remote teaching, principals' leadership roles were more managerial. In contrast, Garcia et al. (2019) stated that the principals' leadership roles were instructional. Over half of the 11 participants of the current study expressed that during the COVID-19 pandemic crisis of 2020, the data showed that principals went from a managerial and instructional leadership role to a technology leadership role. Participants 2 and 3 stated that the increased technology usage during the COVID-19 pandemic crisis of 2020 caused uneasiness in their comfort levels with moving to a technology leadership role. Participants 5 and 8 said they "felt" that they had a "basic understanding of technology" and that "going to school online" for their degree was "an asset during the COVID-19 pandemic crisis." Similarly, Participant 2 stated that because they had received their degree online, they had an advantage when their role became that of a technology leader. Participant 9 did not feel prepared to support teachers and students during the COVID-19 pandemic crisis of 2020 because their skill set for technology was weak.

As reported by Participants 4 and 9, the sudden shift to relying on technology more during the COVID-19 pandemic crisis of 2020 brought to the forefront that principals and teachers had varying levels of technology abilities. Participant 8 said they were "not savvy enough to work with technology with teachers." Similarly, Participants 3 and 10 reported that many teachers were savvier with technology than they were. Participant 10 acknowledged that many teachers they worked with needed to be savvier,

and they wanted to take on technology. Participant 1 shared that, in their case, the pivot to online learning had "some teachers willing to go above and beyond." There was a consensus among many participants that their varying skill levels brought to light their underlying fears of providing technology leadership to support teachers during this time.

Participants shared experiences of the change from instructional leadership to a principal who led with technology leadership during the COVID-19 pandemic crisis of 2020. Participant 3 stated that even "basic communication" changed during this time. Participant 3 had to learn to use Webex, Schoology, and "other district-approved programs to communicate." Similarly, Participants 5 and 7 mentioned that their "basic communication changed, and expectations of technology during the COVID-19 pandemic crisis meant supporting teachers in troubleshooting their technology issues while working remotely." Participant 9 stated they "needed to be more knowledgeable about solving technology issues." Participants 2 and 5 mentioned that being a first-year principal during this time reinforced that they "were not prepared for all the experiences and the challenges" that arose during the COVID-19 pandemic crisis of 2020.

These findings look at RQ 1, Theme 1: Technology Comfort and Fear of U.S. K-5 principals' perceptions they faced relating to technology leadership during the COVID-19 Pandemic crisis. Some participants found moving to a technology leadership role uneasy and even unprepared. However, other participants felt they had a basic understanding and could manage the change. Alignment of the data from the interview transcripts supports RQ1, Theme 1, in how U.S. K-5 principals perceive technology leadership.

Theme 2: Principals' Challenges of Technology Leadership During the COVID-19

Pandemic Crisis of 2020

Throughout the transcripts from the interviews, participants highlighted many

challenges faced relating to technology leadership during the COVID-19 pandemic crisis.

First, the immediate school-level changes, as described by nearly all participants, moved

from instructional leader to technology leader within a few days of announcing school

closures. Participant 10 said, "There was no guidebook for what came during the

COVID-19 Pandemic crisis." Participant 8 mentioned that having working technology or

enough devices for distance learning was an issue." Conversely, Participants 2 and 11

said they "had a lot of technology and materials because their school was in a more

affluent area. However, technology had not been used daily." Participant 2 described their

population as having "higher poverty and families not having access to technology or the

internet." Several participants expressed that not only was having electronic devices for

staff and students to take home during this time, but access to programs was a challenge.

Most participants said they needed clarification on what teachers used in the

classroom for technology programs. With the participant's new role as a technology

leader for their school, knowing better what technology was in the schools and how it

was used became an essential next step in determining the needs of the school, teachers,

students, and families. Participant 4 stated that technology before the COVID-19

pandemic crisis was "basic communication through Microsoft Office 365 and online

programs like Prodigy within the classroom." However, Participant 3 mentioned that

Google programs were the easiest for them and their teachers to learn. Half of the

participants realized that as a technology leader, knowing what the staff are using, requisitioning materials, and being able to troubleshoot issues became a large part of what they did daily. Further challenges came from meeting live for meetings and instruction.

Participants described the new challenges that arose when devices were distributed and were in homes for synchronous learning. Participants listed Zoom, Google Meets, and Webex as modes of connecting with students and families for lessons or meetings. Participants 1 and 4 shared their experience as a technology leader in "popping into the online meetings to watch learning and make contact with students." Also, they stated that it became "apparent that live meetings were posing a safety issue." Most participants affirmed that they had common issues of inappropriate background issues. For example, families dressing in the background, families arguing, siblings joining the meetings, and more. Also, an increasing issue was getting students to attend the synchronous lesson's online portion.

These findings look at RQ1, Theme 2: Principals' challenges of technology leadership during the COVID-19 pandemic crisis of 2020. Numerous participants found that technology leadership was more than basic communication through Microsoft Office 365. As technology leaders, participants needed to know what inventory the school had, what devices were in working condition, whether they had enough one-to-one technology for each teacher and student, and what the teachers used for programs on the devices— challenges included live meetings and background safety concerns. Alignment of the data

reinforcing and encouraging struggling teachers on how to use the tools on the computer in order to reach students.

Participants reported that the technology leadership pivot was challenging. Participants 3 and 8 stated, "Not being as technology savvy and trying to work with teachers to navigate how to set up Schoology courses, live meetings for teaching, and utilizing break out rooms" was difficult. Participants shared that they felt they were on duty leading and leading with technology for an entire workday and more. Participants 5, 9, and 10 shared that they "shielded staff from too many district mandates and focused on what the teachers need before adding more to their plate." The needs were high, and the support was low. All participants expressed that they did their best with what they had.

These findings look at RQ 1, Theme 3: Challenges in leading teachers during the COVID-19 pandemic crisis of 2020. At the beginning of the COVID-19 pandemic crisis of 2020, there was a rush to move teachers and students to online learning. Both participants and teachers needed professional development to work with the systems and programs they would need to communicate, meet virtually, and teach synchronously and asynchronously. Participants found it challenging to meet their own and teachers' needs. Alignment of the data from the interview transcripts supports RQ1, Theme 3, challenges in leading teachers during the COVID-19 Pandemic crisis of 2020.

Theme 4: Distance Education

The COVID-19 pandemic crisis of 2020 brought a need to move from a traditional model of school to one that had students receive their education through distance education. Participant 6 expressed that distance or online education offers new

opportunities and issues. Participant 10 stated that "leading through technology during a pandemic felt more like building a ship as it was flying." Participant 11 had similar sentiments about "building a model while all the organization pieces were in play." All participants expressed the urgency to get distance education started.

Participants 4 and 9 expressed a sense of urgency when implementing emergency procedures, obtaining online distance education learning devices, and having programs to utilize. First, after the shutdown began, all participants shared that schools needed to acquire devices such as Chromebooks and iPads. Participant 4 stated the "need for devices that all students could access." Conversely, Participant 6 had Chromebooks, but not all were in working condition. Participants 3 and 7 needed to purchase laptops immediately. Participant 1 shared concern that "the equity between the haves and have-nots was evident at the pandemic's beginning." Next, Participant 1 shared that the school needed the means to have equipment readily available to finish the school year for distance education. Participant 2 did not have a school-wide technology supply but had a cart with limited iPads that classrooms shared for station rotations. The need for one-to-one technology, functioning technology, or a plan to move for distance education made the transition complex.

Participants 6 and 11 were a one-to-one device school. However, they stated that until the COVID-19 pandemic crisis, they " were less involved as a technology leader. Participants 6 and 11 shared that "knowing how many devices the school had and if they worked" was not something they knew until the COVID-19 pandemic crisis happened.

Also, Participant 9 said that once students needed one-to-one devices for the first time, "I thought about what my teachers were using the technology for."

Participants 2 and 11 stated, "At the start of the COVID-19 pandemic crisis, there was not enough working technology." Conversely, Participants 5 and 7 had one-to-one devices for all students. As one-to-one technology was acquired, all participants expressed that their district gave a 3- to 5-day training on the precautions needed to operate the school. However, six out of 11 participants' districts gave limited suggestions on what programming to use during distance learning.

The data revealed that participants were building upon the existing platforms to start online distance learning. For example, Participant 10 used Canvas for their platform. Participants 7 and 9 used Schoology as their platform, and Participant 2 used Google Classroom as their platform. The platforms allowed teachers to set up a system for online distance learning. The issue participants experienced with having online platforms is that not all teachers had exposure and training to utilize the platforms. Also, most participants needed to know how to utilize the systems their district chose.

Data from the transcripts showed that participants had many common problems with technology leadership as the COVID-19 pandemic crisis continued into the 2020-2021 school year. Participants 5 and 9 found that they had to be technology leaders for staff, students, and parents, even if their skills were not proficient. Participant 11 found that technology leadership extended to training teachers to support colleagues and parents. Participants 1 and 7 found that establishing asynchronous and synchronous learning proved to "be difficult once distance learning became a hybrid between them and

in-person learning." Participants 2 and 8 expressed in the transcript that they felt their instructional leadership would be sufficient in leading; however, Participant 3 noted that being "innovative while leading through the COVID-19 pandemic crisis kept teaching and learning."

Principal Suggestions for Improving Technology Leadership Training

Through the review of the participants' interviews, I found that U.S. K-5 principals varied in their suggestions for improving technology leadership training and resources which produced the following themes: (a) adaptation, (b) technology leadership training, and (c) leadership resource suggestions.

Reviewing the 11 participant transcripts and through the coding and final themes selection for Research Question 2 showed that participants found that their experiences and adaptations during the COVID-19 pandemic crisis of 2020 showed the gaps in their needs to handle this type of crisis. Moving from instructional leadership to technology leadership during the COVID-19 pandemic crisis of 2020 informed the participants of their needs for technology leadership training and leadership resource suggestions.

Theme 5: Technology Leadership Training

All the participants said the COVID-19 pandemic crisis of 2020 was unlike any other crisis they had to lead through. This crisis moved principals, teachers, and students globally into a new type of leading, teaching, and learning. The data from the transcripts provided evidence that the participants expressed a need for professional development. Data collected from the participant interviews showed that participants had varied needs

in professional development. Also, the data showed that the participants' direct needs

included their desire to have technology training and leadership management.

Through the data analysis of the interview transcripts, Participant 3 and

Participant 10 declared "the need for more support from the district in how to navigate

programs to support staff during distance education." Participants 1 and 11 acknowledged

that "although the familiarity with technology was strong, guiding teachers in elementary

school through how to teach during this time was difficult." More than half of the

participants discussed that "their administration programs did not provide a course that

prepared them to lead with technology in a way that was beneficial to those whom they

led or supported during the COVID-19 pandemic crisis of 2020." Participants 8 and 10

shared their concern that upon being hired to be principal, there were no opportunities

during the new hire institute for principals to include a plan and support for being a

technology leader and support." Also, Participants 2 and 5 expressed that they became

principals later in life and that and stated, "there was no advanced training for those who

did not have to use technology for more than primary managerial uses." Participants 2

and 5 further stated, "that when the COVID-19 pandemic crisis closures happened, the

lack of prior training was a determent in their ability aid staff with their technology

leadership." Lastly, the data analysis of the transcript was consistent with the participant's

needs for further training in technology leadership. The distance education expectations

continued to pivot, and based on the transcript data, more than half of the participants

expressed that they needed professional training to support teachers and to provide a

smoother, more confident, and knowledgeable execution of support as a technology leader.

Data analysis further showed that each participant's need for professional development varied. Participants 1 and 11 stated that they had been "principals for over 10 years and honestly did not know how best to utilize programs like Schoology or math-specific online programs" in order to help teachers manage these programs. Participants 6 and 7 stated, "Guiding teachers from programs they may have had students used in small rotations in the classroom to now having teachers make them a part of distance education proved too difficult" because these participants did not know what the programs were and how they would work in the long term. Furthermore, Participants 2 and 9 stated "that to support schools, the district mandated platforms like Canva, Schoology, and Google Classroom." In addition, Participants 3 and 6 experienced the platform change and expressed "that having a new and never-before-used platform felt burdened the situation when they as principals were untrained in how to use the platform." Conversely, Participants 3 and 8 had "obtained their master's degree through a college online and felt that guiding teachers through online platforms" was something they could do. Comparatively, the participants during the COVID-19 pandemic crisis of 2020 needed support in their technology leadership abilities.

As the COVID-19 pandemic crisis extended and continued into the fall 2020 school year, many participants stressed that the shift to supporting staff through technology leadership had new challenges. Participant 10 stated, "Leading through technology became further complicated when teachers needed assistance by

implementing teaching through a new platform but with asynchronous and synchronous learning." Participants 3 and 8 shared "that returning to school in the fall of 2020 was hard to navigate asynchronous and synchronous learning." Participants 6 and 9 needed to familiarize themselves with implementing and monitoring asynchronous and synchronous learning and needed support in supporting teachers through the technology-impacted aspect of it.

Furthermore, Participants 4 and 5 said, "Asynchronous and synchronous learning had issues with working technology, programming, and expectations." Transcript data analysis revealed that approximately four of the eleven participants had someone in the school who could assist with technology checkout and some troubleshooting. However, four participants shared that they relied on more technology-versed staff members to support them and the teaching staff. Participant 5 stated, "Working with teachers unfamiliar with technology on a distance education level was challenging." Many participants stated that much of their time was spent working through technology issues, waiting for the district to resolve Wi-Fi issues, and teachers having difficulty with their comfort level of teaching with technology.

Although Participant 10 felt the resources were adequate for their school, a common issue across their district, stated by this participant, was the need for more consistency in program expectations for distance education. According to Participant 7, "At the start of COVID-19, we were getting by with what we had. In the Fall, there was a need for consistent learning programs for asynchronous and synchronous learning for students to use." Participant 8 said, "Learning programs were expensive." Many

participants reported that some online programs were free, some were free for a set time

limit, and a few reported that the school purchased a subscription. Participant 3 stated,

"Programs for asynchronous and synchronous learning required some or much training."

Also, participants' interviews reflected on having a new problem. Participants 6 and 9

stated, "Many of the free programs had inappropriate pop-up ads." This created an

additional problem for participants in delivering educational and safe learning programs

in asynchronous and synchronous learning. Most participants said there was a need for

district support in setting guidelines to vet what programs were safe for distance

education.

Theme 6: Leadership Resource Suggestions

Many participants discussed that they spent the Spring of 2020 scrambling to

meet the needs of staff, students, and families. For some participants, this was their first

time as a principal. A few other participants were special service teachers before

acquiring their principal license. Participant 11 said, "The difference between special

service teachers and multi-subject instructional teacher experience was clear when the

entire school district shut down." Participants 1 and 11 "agreed that having an

instructional leadership background was beneficial to supporting teachers." However,

Participant 11 explained, "No matter the experience or lack of experience in leading

during COVID-19, moving to a technology leader while supporting CDC mandates was

difficult. Also, for veteran principals, the participants varied in how they felt moving to a

technology leader made their jobs easier or more difficult. Three veteran participants

were principals in affluent schools with one-to-one technology and a set platform;

however, Participants 3 and 4, Although veteran administrators, did have the same experience. The transcript data analysis showed that U.S. K-5 school principals had numerous suggestions for supportive resources that would have supported them during the challenges they faced during the pivot to online education during the COVID-19 pandemic crisis of 2020.

One common resource between the participants was a user-friendly platform for teachers, students, and families." For example, Participant 2 said, "Administration at the district level gave the mandate to use Microsoft Suite items to facilitate communication and meetings." However, Participants 2 and 9 "Were instructed by the district to use what worked best for their school." Participants 2 and 9 struggled with this because some families were "Apple system families" while other families had no devices at home. Platforms such as Schoology, Microsoft Teams, Canva, and Google Classroom were the most discussed systems used during the COVID-19 pandemic crisis in 2020. Participants 7 and 9 said, "At the start of the pandemic, we used what we had access to." Participant 10 referenced "that from Spring to Fall of 2020, the district changed platforms three times." The data showed that more than half of the participants struggled with staff and themselves knowing how to use the platforms and applications as the pandemic continued. There was a need to have district-wide resources that would support the training participants and staff to thrive during the pandemic.

Evidence of Trustworthiness

This basic qualitative study's data analysis is from the eleven participants' responses to semistructured interview questions. The trust and reliability of the data came

from the interpretation and practices used for the data collection. The evidence criteria are as follows: credibility, transferability, reliability, and confirmability (Burkholder et al., 2019; Korstjens & Moser, 2018).

Credibility

In a basic qualitative study, Korstjens and Moser (2018) stated that credibility is confidence in truthful research findings. The analysis of individual interviews produced common perceptions during the coding process. The data collection from the semistructured interviews and participants' perceptions were recorded via Zoom. Also, a transcript from the individual interview was given to each participant to ensure accuracy. After each participant returned their approved transcript, I began coding the commonalities between the participants. During this process, coding words and phrases allowed emerging themes to develop. Burkholder et al. (2019) and Ravitch and Carl (2021) stated that establishing credibility ensured saturation and reflexivity. This establishment of credibility was essential to capture participants' perceptions and authentically analyze and interpret their responses.

Transferability

Transferability allows the research to transfer to other contexts (Korsjens & Moses, 2018). This basic qualitative study sought to explore U.S. K-5 principal perceptions of the challenges they faced during the pivot to online education during the COVID-19 Pandemic crisis of 2020. Thick, rich descriptions were provided regarding the data from the participant selection, sample demographics, study criteria, interview

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procedures, and transcription verification. Providing this detailed information is essential to the transferability process.

Dependability

Dependability in a study includes an audit trial and full disclosure, describing the steps taken from the beginning of the basic qualitative study through the findings. The audit trail begins by providing the participants with a transcript of their interview to allow them to elaborate on and clarify their data. The semistructured interviews used for this study allowed the participants to guide the discussion on their essential perceptions. After the transcripts were approved and finalized, a thorough and accurate account of their perceptions was recorded in a researcher diary I kept. Further, to ensure dependability, I used the diary to track and examine the study areas and how the data affected my research decisions during the study. Next, a detailed description of the coding process was captured in the diary. The diary included how the data was analyzed, the steps to recruit participants, and the data coding. Also, the diary held any personal conceptual beliefs, examination of assumptions, and analysis of preconceptions and values—the established processes directed an established quality and integrity in the study. The data were reviewed numerous times to ensure alignment of the study.

Confirmability

Conformability within a study ensures that data collection and interpretations correlate with the study. After individual participants validated their transcripts, I further reviewed the process to confirm that all interviews were consistent. Also, maintaining an

audit trail of study notes ensured the confirmability of all reflections and thoughts. All coding reflected each participant's words and phrases and not my thoughts.

Furthermore, the transcribed data from the individual participants in this study supported the facilitation of documenting an audit trail. Also, the procedure for gathering and analyzing participant data was analyzed and separated into themes and subthemes. Participant transcripts were manually coded multiple times in Microsoft Excel, and coding within Microsoft Excel supported determining the primary themes.

Summary

This basic qualitative research study explored 11 principals' perceptions of the challenges, training needed, and resources needed to lead teachers during the transition to a virtual school environment. The purpose of this basic qualitative study was to explore U.S. K-5 school principals' perceptions of the challenges they faced during the pivot to online education during the COVID-19 pandemic crisis of 2020 and suggest improvements to training and resources provided. In Chapter 4, I described the setting and demographics relevant to the study participants. This study included 11 U.S. K-5 school principals. Chapter 4 outlines how I collected the data, including analyzing the participants' interview data. Research Question 1, four themes emerged: Principals' Technology comfort level and fears, principals' challenges of technology leadership During the COVID-19 pandemic crisis of 2020, challenges in leading teachers during the COVID-19 pandemic crisis of 2022, and distance education. Research Question 2 emerged with two themes: technology leadership training and leadership resources suggestions.

In Chapter 5, I will describe the purpose of the study and summarize the key findings. I will interpret the findings utilizing and comparing peer-reviewed literature. Then, I will discuss the study's limitations, recommendations for future studies, and the implications for positive social change resulting from this study.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this basic qualitative study was to explore U.S. K–5 school principals' perceptions of the challenges they faced during the pivot to online education during the COVID-19 pandemic crisis of 2020 and their suggested improvements to training and resources provided. By obtaining a better understanding of U.S. K–5 school principals' perceptions of what improvements to training and resources are needed during a pivot to online education in a crisis, district leaders may develop additional support for current and future principals by identifying a support plan utilizing the crisis management lifecycle that outlines unexpected, nontypical crises.

In Chapter 5, I provide a thorough summary of the findings; make comparisons between the findings and Grissom and Condon's crisis management lifecycle; and describe how the results confirm, disconfirm, or extend knowledge in the literature related to the challenges principals faced during the pivot to online education during the COVID-19 pandemic crisis of 2020 as well as their suggested improvements to training and resources provided. Chapter 5 also includes a discussion of the study's limitations, my recommendations, and the implications for future research before ending with a conclusion.

Interpretation of the Findings

In this section, I present the study findings based on the themes that emerged from data analysis. The crisis management lifecycle theory by Grissom and Condon (2021) comprised the conceptual framework for this study.

Principals' Technology Comfort Level and Fears

Sterrett and Richardson (2023) stated that principals are at the front lines when navigating a crisis. Until the COVID-19 pandemic crisis, a crisis in education included but was not limited to school shootings, social unrest, bomb threats, teacher strikes, and natural disasters (Hayes & Derrington, 2023; Striepe & Cunningham, 2021). Karasavidou and Alexopoulos (2019) stated that a crisis can entail more incidents because a crisis is urgent and demands immediate action. The COVID-19 pandemic crisis changed the expectations of a principal and their leadership. The study results confirmed that principals' new roles as technology leaders involved increased expectations of being a technology leader. Many of the participants did not have technology experience at the level that they were comfortable with leading teachers in distance education and feared they would be unable to support teachers.

The current study results align with the first and second stages of Grissom and Condon's (2021) crisis management lifecycle. Principals in the first stage work through mitigation and prevention by assessing risks and weaknesses to prepare for the crisis, and then, using that knowledge, move to the second stage of preparedness. Grissom and Condon stated that creating well-prepared plans includes the logistics, training, communication, and assigned roles. The current study findings show that the participants working within the first two stages with low comfort in technology leadership skills felt unprepared and fearful of being able to support staff during the COVID-19 pandemic crisis of 2020.

Principal Challenges of Technology Leadership During COVID-19

Researchers have indicated that a change in principal leadership roles (Sterret & Richardson, 2020b) came with extraordinary challenges during the COVID-19 pandemic crisis (Bagwell, 2020), and moving from a manager to an instructional and technology leader came quickly (LeChasseur et al., 2019). Former crises, like school shootings, social unrest, bomb threats, teacher strikes, and natural disasters, had been previously studied utilizing the crisis management lifecycle and a plan of action principals could use had been developed (Hayes & Derrington, 2023; Striepe & Cunningham, 2021). The current study results showed that the COVID-19 pandemic crisis of 2020 was unlike other crises, and because of its global magnitude, principals did not apply the crisis management lifecycle.

The first phase of the crisis management lifecycle is mitigation and prevention. The current study confirmed that the participants did not apply this phase and instead created a team to assess the current systems and policies to create a plan in preparation for the COVID-19 pandemic crisis of 2020. The second phase of the crisis management lifecycle is preparedness. The study findings affirmed that the participants did not have a well-prepared plan for the logistics, training, communication, and roles (see Bishop et al., 2015). This phase engages staff to respond to crises (James & Wooten, 2005). The study findings showed that not all participants had a technology background to support leading technology for staff and students working or learning through distance education. The participants confirmed that the COVID-19 pandemic crisis of 2020 was urgent and demanded the need for a technology leader during a high-need time, leaving participants

feeling unprepared and needing more support. The third phase of Grissom and Condon's (2020) crisis management lifecycle, response, provides an opportunity to gain advice, reach out for information, and find practical use for internal and external resources. The literature states that principals' actions during this phase should be swift in how they respond to contain a crisis (James & Wooten, 2005). The participants confirmed that the district had limited support in this phase. The study findings showed that the unforeseen crisis made navigating this phase difficult and that participants needed more technology experience while working through communication, procurement of technology, and finding internal and external resources and support during the COVID-19 pandemic crisis of 2020. The participants remarked that the swift change to being a technology leader came with many challenges in handling responses during the COVID-19 pandemic crisis when leading teachers.

Challenges in Leading Teachers During COVID-19

Prior to the COVID-19 pandemic crisis, principals' primary tasks were administrative (Garcia et al., 2019; Karakose et al., 2021) and shifted rapidly to become technology leaders with the onset of the pandemic (Honig, 2019). The current study results confirmed that participants had to become more of a technology leader to support teachers with distance education. Participants found it challenging to lead teachers because there was no guidebook for distance education and handling the COVID-19 pandemic crisis. The quick school closures came with many questions and tasks that principals had yet to anticipate.

The current study findings showed that some participants acknowledged they were comfortable with basic technology skills, but many needed a strong technology background. The study findings extended the findings of previous researchers that indicated those principals who attended online college courses felt prepared as technology leaders; however, during the COVID-19 pandemic crisis of 2020, previous technology experience was a limited asset for supporting teachers through distance education. The current study findings showed that participants' technology leadership expanded to technology distribution, problem solving technology issues, helping teachers through asynchronous and synchronous learning, and implementing appropriate, sustainable programs for distance learning. Moreover, with the rapid closure of schools during the COVID-19 pandemic crisis of 2020, district-level support provided programs for access to video conferencing (e.g., Canvas, Microsoft Teams, or Zoom). The study results confirmed that technology leadership encompassed more than accessing video conferencing programs.

Researchers found that leading teachers through the COVID-19 pandemic crisis 2020 posed stressors for principals (Urick et al., 2021). The current study results showed that teachers had strengths and weaknesses when using technology. The participants confirmed that even veteran teachers struggled with technology during the COVID-19 pandemic crisis. Many participants reported that their technology experience was sometimes more limited than that of the teachers. The study results indicated that Phases 1 and 2 of Grissom and Condon's crisis management lifecycle, mitigation and prevention and preparedness, respectively, were reflected through the continuous changes in how

participants' technology leadership advanced during the COVID-19 pandemic crisis of 2020.

Phase 4 of Grissom and Condon's (2021) crisis management lifecycle, recovery, became evident as the COVID-19 pandemic crisis of 2020 moved from the spring to the fall of 2020. The current study results confirmed that participants had moved through the acute event and began the recovery phase to sustain better outcomes as the COVID-19 pandemic crisis continued. Many participants acknowledged that their school districts moved to transition back to in-person school. The study findings demonstrated that technology leadership would continue to be necessary for participants. Returning to school in-person continued with one-to-one technology devices, programs, and video conferencing programs for meetings and synchronous learning.

In the crisis management lifecycle, Grissom and Condon (2021) defined the fifth phase, the learning phase, as the reflection phase. In this phase, the participants who experienced the COVID-19 pandemic crisis used intentional learning and reflection to better prepare to manage this crisis. The study results confirmed that participants could use the five phases of Grissom and Condon's crisis management lifecycle to analyze their perceptions and identify their needs for training and resources.

Distance Education

The COVID-19 pandemic crisis of 2020 brought a need to move from a traditional model of school to one in which students received their education through distance education. Participant 6 expressed that distance or online education offers new opportunities and issues. Participant 10 stated that "leading through technology during a

pandemic felt more like building a ship as it was flying." Participant 11 had similar sentiments about "building a model while all the organization pieces were in play." All participants expressed the urgency they felt to get distance education implemented.

Participants 4 and 9 expressed the sense of urgency when implementing emergency procedures, obtaining online distance education learning devices and having programs to utilize. After the COVID-19 pandemic-related shutdown began, all participants shared that their schools needed to acquire devices, such as Chromebooks and iPads. Participant 4 stated the "need for devices that all students could access." Conversely, Participant 6 had Chromebooks, but not all were in working condition. Participants 3 and 7 needed to purchase laptops immediately. Participant 1 shared the concern that "the equity between the haves and have-nots was evident at the pandemic's beginning." Participant 1 also reported that their school needed the means to have equipment readily available to finish the school year for distance education. Participant 2 did not have a school-wide technology supply but had a cart with limited iPads that classrooms shared for station rotations. The need for one-to-one technology, functioning technology, or a plan to move for distance education made the transition to distance education complex.

Participants 6 and 11 led a one-to-one device school; however, they stated that until the COVID-19 pandemic crisis, they "were less involved as a technology leader." These two participants shared that "knowing how many devices the school had and if they worked" was not something they knew until the COVID-19 pandemic crisis

happened. Participant 9 also said that once students needed one-to-one devices for the first time, "I thought about what my teachers were using the technology for."

Participants 2 and 11 stated, "At the start of the COVID-19 pandemic crisis, there was not enough working technology." Conversely, Participants 5 and 7 had one-to-one devices for all students. As one-to-one technology was acquired, all participants expressed that their district gave a 3- to 5-day training sessions on the procedures needed. However, 6 out of 11 participants' districts provided limited suggestions on what programming to use during distance learning.

Participants were building upon the existing platforms to start online distance learning. For example, Participant 10 used Canvas for their platform, while Participants 7 and 9 used Schoology and Participant 2 used Google Classroom as their platforms. The platforms allowed teachers to set up a system for online distance learning. The issue participants experienced with having online platforms was that not all teachers had exposure and training to utilize the platforms. Most participants also needed training to know how to utilize the systems their district chose.

Participants reported many common problems with technology leadership as the COVID-19 pandemic crisis continued into the 2020–2021 school year. Participants 5 and 9 found that they had to be technology leaders for staff, students, and parents even if their skills were not proficient. Participant 11 discovered that technology leadership extended to training teachers to support colleagues and parents. Participants 1 and 7 shared that establishing asynchronous and synchronous learning proved to "be difficult once distance learning became a hybrid between them and in-person learning." Participants 2 and 8

expressed that they felt their instructional leadership would be sufficient in leading; however, Participant 3 noted that being "innovative while leading through the COVID-19 pandemic crisis kept teaching and learning."

Technology Leadership Training

According to Westberry (2021), the changes in technology increased the expectations for principals in technology leadership. Azukas (2022) and Fancera et al. (2021) stated that training in technology leadership for principals before the COVID-19 pandemic did not adequately prepare principals. Technology leadership training before the COVID-19 pandemic crisis of 2020 entailed supporting staff in gathering data on student achievement on online instructional and communication systems (Dandalt, 2021). The current study participants confirmed they were more managerial or instructional leaders than technology leaders before the COVID-19 pandemic crisis of 2020 and that the sudden pivot to shutting down schools during the COVID-19 pandemic and moving educational delivery online versus in-person quickly established the need for technology leaders.

Esplin et al. (2018) stated that principals need effective technology leadership training to fulfill their role as technology leaders. The study results confirmed that participants needed leadership training to be technology leaders. Participants varied in their level of comfort and skill with technology. The participants confirmed they faced numerous challenges and declared more pre-requisite training and resources may have supported them to overcome the technology leadership challenges during the COVID-19 pandemic crisis of 2020. Grissom and Condon's crisis management lifecycle phase four,

recovery, and phase five, learning, allowed a reflection after the assessments,

preparedness, and response phases to the experiences participants went through during

the COVID-19 pandemic crisis of 2020.

According to the participants, reflecting on their technology leadership during the

COVID-19 pandemic crisis of 2020, it was noted that their need for technology

leadership training was necessary. The participants extended that technology leadership

training would be beneficial to supporting teachers through the asynchronous and

synchronous environment that education had during the COVID-19 pandemic crisis of

2020. Asukas (2022) stated that leadership training is necessary, and Gonzales (2020)

warned that principals need training to feel prepared. Schools will likely face other crises

(Striepe & Cunningham, 2021). Furthermore, principals' ability to lead through

technology will have increased expectations (Francera & Saperstein, 2021). The study

aligns with the conceptual framework of Grissom and Condon's crisis management

lifecycle phases to evaluate and synthesize the challenges that could come in the future

and receive the training needed.

Leadership Resources Suggestions

Researchers Striepe and Cunningham (2021) stated that there is a strong

likelihood that schools will face other unexpected crises. Principals will face increased

expectations (Francera & Saperstein, 2021), and like the COVID-19 pandemic crisis of

2020, a new crisis will pose a further need for being a technology leader. The study

findings demonstrated that the COVID-19 pandemic crisis of 2020 was unlike other

crises, and there was a pivot to distance education during the pandemic. The participants

confirmed that the pivot to distance education came with a need for leadership resources that were unavailable or unavailable at the level needed for this crisis. As the COVID-19 pandemic crisis of 2020 continued, the participants' needs grew.

Grissom and Condon's (2021) crisis management lifecycle's five phases support specific strategies in preparing an educational organization for a crisis. The COVID-19 pandemic crisis of 2020 presented a unique situation where schools needed to familiarize themselves with the needs required to run the educational organization smoothly. Based on the research, utilizing the five phases of Grissom and Condon's crisis management lifecycle, a principal can ready their school for another unforeseen, nontypical crisis. To address the leadership resource needs, Grissom and Condon's crisis management lifecycle Phases 4, recovery, and 5, learning, connect the participants' reflections on what resources would have supported them during the COVID-19 pandemic crisis of 2020.

This study confirmed that the participants felt that technology leadership training was needed. According to the participants, there is a range of needs, from operating basic skills to more advanced skills in using current technology, foundational programs, and training in programs specific to district mandates, like the online platform used during the COVID-19 pandemic crisis of 2020 to deliver distance learning and communications. Also, through the study's findings, participants needed support in technology troubleshooting, vetting academic online educational programs, and training the teachers on utilizing technology for instruction. Grissom and Condon's crisis management lifecycle Phase 4, learning, provided an opportunity for principals to reflect on the intentional learning needed to better prepare for a crisis. Therefore, reflecting on

principals' needs revealed that technology leadership training needed to go beyond virtual meetings and simple tasks.

Limitations of the Study

For this basic qualitative study, there was a concern I would not find enough U.S. K-5 principals' participants who worked during the COVID-19 pandemic crisis of 2020 on administration and leadership social media platforms (e.g., Facebook, Instagram, etc.) and Walden's participant pool during a busy season for principals. The initiative to send over 300 emails and invite participants in over a dozen social media group postings requesting participants for the study produced 11 participants. Finding enough participants did not, in the end, pose a limitation to the study. Lastly, a limitation could be that the responses to interview questions may not have been truthfully answered. As far as I am aware, participants were open and descriptive in their sharing of information.

Recommendations

This basic qualitative study explored U.S. K-5 school principals' perceptions of the challenges they faced during the pivot to online education during the COVID-19 pandemic crisis in 2020 and suggested improvements to training and resources provided. Interviewing principals provided insight into how they perceived the challenges of leading during the pivot to online education and discovered their suggested training and resource improvements. The recommendation for future research studies is to add to this study and include principals who worked during the COVID-19 pandemic crisis of 2020 in rural, inner city, charter schools, middle high schools, and high schools. Obtaining additional perspectives would contribute to understanding the challenges of leading

during the pivot to online education. Also, to see if it would align with elementary school principals' suggested training and resource improvements.

Another recommendation is to thoroughly examine the connection between district and school-level crisis management and how it compares to Grissom and Condon's crisis management lifecycle. Providing the comparison with concrete examples aligns with the five phases of Grissom and Condon's crisis management lifecycle. The participants in this study had a varied mix of leadership experience and had yet to work through a crisis on a global level. Further research could assist higher education in restructuring their principal administration programs to address crisis management through a technology leadership lens. Also, this could assist school districts in reevaluating how they address crisis management and include training for principals in technology leadership.

Implications

The purpose of this basic qualitative study was to explore U.S. K-5 school principals' perceptions of the challenges they faced during the pivot to online education during the COVID-19 pandemic crisis of 2020 and suggest improvements to training and resources provided. The compilation of data and the research questions, what are K-5 school principals' perceptions about the challenges they faced relating to technology leadership during the COVID-19 pandemic crisis? What do K-5 school principals suggest for improving technology leadership training and resources? The findings can explain the participants' perceptions of the challenges they faced in technology leadership during the COVID-19 pandemic crisis and their suggestions for improving technology leadership

training and resources. The participants' suggestions provided an understanding of what training and resources were needed during the COVID-19 pandemic of 2020 to implement technology leadership. This study can provide insight into improving technology leadership training and resources needed during the COVID-19 pandemic of 2020.

The data collected from the study's research questions showed that participants had varied comfort levels and fears regarding technology. While a few participants felt differently, technology leadership became more than daily communication and more about supporting teachers through asynchronous and synchronous learning. Some participants needed more support than others and were able to identify their needs. The pivot to distance education brought an increased need for leaders who could be technology leaders. The findings confirmed that principals faced challenges as technology leaders during the COVID-19 pandemic crisis in 2020. Participants remarked that no guidebooks were to direct them to the expectations during an unforeseen crisis. The study discovered that in the emergency pivot to distance learning, many participants needed to have technology devices that work, enough technology, or, in rare cases, enough technology to start distance learning. Principals found further challenges in leading teachers during the COVID-19 pandemic due to their varied experiences with technology or programs.

Additionally, distance education posed issues for participants because the gap in understanding what teachers were using, how it was used, and if it was a viable program for learning made it difficult for participants' effectiveness. I used Grissom and Condon's

crisis management cycle as the conceptual framework to support the study. Grissom and Condon's crisis management cycle as the conceptual framework to support the study, I used the five phases to identify within the research results and reflect on how participants could manage through and prepare better for the crisis.

The findings confirmed that principals needed to prepare to be technology leaders in the sudden pivot to distance education during the COVID-19 pandemic of 2020. I used Grissom and Condon's crisis management lifecycle as the conceptual framework to support the study. An effective and efficient way for schools and districts to identify their risks and weaknesses, preparedness, response to a crisis, recovery, and reflection on learning is to apply the crisis management lifecycle to take action and plan intentionally for their needs. Through the research, the data confirmed that participants need technology leadership training and resources.

Although there were many challenges throughout the COVID-19 pandemic crisis of 2020, the participants realized their role had changed, and technology leadership was essential. As a result, this study could guide changes in an organizational structure by using Grissom and Condon's crisis management lifecycle to employ a practice of early crisis planning in preparing an educational organization for future crises.

The results of this study lend support to a proposal of several implications:

1. Principals need disaggregated, individually targeted, and intentional support in technology leadership. The purposeful deep dive into those needs with a higher education partner should be considered part of the process to determine the training and resources that best support a principal who can implement

technology leadership with or without a crisis. Strengthening the targeted training principals need to develop as a technology leader may affect their ability to develop strength and understanding to enhance their foundation to feel prepared for future crises.

2. Technology leadership is a role principals could utilize at a more in-depth and involved level of support with teachers. The development of resources readily available for principals is beneficial in improving the effectiveness of technology leadership for the building and teacher support.

3. The training and resource development and support for principals provide an opportunity to pivot to distance education if the need arises during future crises.

4. The beneficial social change could contribute to principals' long-term readiness to handle unforeseen crises, a better understanding of technology leadership without a crisis, and the ability to support teachers of all levels of technology stages.

Conclusion

The purpose of this basic qualitative study was to explore U.S. K-5 school principals' perceptions of the challenges they faced during the pivot to online education during the COVID-19 pandemic crisis of 2020 and their suggested improvements to training and resources provided. Through semistructured interviews, I learned how principals perceived the challenges and their suggestions for improving training and resources provided during the COVID-19 pandemic crisis of 2020. The themes that

emerged from the data analysis included perceptions of the challenges they faced through their technology comfort and fears, their challenges of technology leadership during the COVID-19 pandemic crisis of 2020, challenges in leading teachers during the COVID-19 pandemic crisis of 2020, the pivot to distance education, the need for technology leadership training, and leadership technology resource suggestions.

Participants articulated that they were unprepared for the quick change in their roles and part in supporting teachers through technology leadership. However, as the COVID-19 pandemic continued, their awareness of the need for training and resources grew. The participants expressed their concerns and needs but, more importantly, delineated explicitly the need for training to handle an unfamiliar and unforeseen crisis. Principal licensing or district principal induction programs would benefit from further support utilizing the crisis management lifecycle to address unforeseen and unfamiliar crises. The study findings demonstrate the importance of preparing principals in a crisis more thoroughly by identifying and synthesizing how to manage a crisis. Since the COVID-19 pandemic crisis of 2020, it has become evident that a crisis led by a principal with a foundation in technology could benefit the educational organization in facilitating the handling of a crisis. The study results may inform higher education and district leaders of the importance of providing training and resources that build a solid foundation of technology leadership and crisis management for principals.

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Appendix A: Interview Protocol

Hello, my name is Catherine Mlodzik, and I am a doctoral candidate in the

Administration and Leadership program at Walden University. Thank you for taking the

time to speak with me today. This interview aims to explore the elementary school

principals' perceptions about the challenges they faced. By exploring *elementary school*

principals' perceptions about the challenges, they faced, the study may help build

knowledge and suggest improvements to training and resources provided to principals for

technology leadership, which could impact preparedness for tech leadership in any

situation. In this interview*, t*he answers you provide will not be viewed as right or wrong

and will allow you to be comfortable saying what you feel or think, giving me valuable

insight into your experiences in technology leadership during the pandemic.

During this interview I would like to record our conversation. Do I have your permission

to record our meeting?

[Wait for response]

[Push record]

Great. It is now recording.

RQ1: What is K-5 school principals' perceptions about the challenges they faced relating technology leadership during COVID-19 pandemic crisis?

The following questions are about your experience as a principal leading teacher during emergency distance education.

1. What were your experiences as a leader during the COVID-19 Pandemic crisis?

2. How did the school district-initiate school closures?

3. How did the school district pivot to online instruction?

4. What challenges did you face during the COVID-19 Pandemic crisis a technology leader?

5. What did you find the most challenging piece or pieces of the process of working and supporting teachers during covid 19 and the move to emergency distance education?

6. Had you faced similar challenges prior to the COVID-19 Pandemic with crisis management? (Mitigation and Prevention Phase)

7. How did emergency distance education challenge you as a leader in your building? Can you share a story about the issues you experienced during this time?

RQ 2: What do K-5 school principals suggest improving technology leadership training and resources?

The following questions are about your suggestions for training and resources to improve leading teachers in distance education.

1. What resources were provided by your district during the pandemic to support you to lead teachers during distance education?

2. What training was provided by your district during the pandemic to support you to lead teachers in distance education?

3. What type of training did you feel you would have benefited from during the pandemic to lead teachers during distance education?

4. What resources or training needs do you feel you would have improved how you could have assisted teachers and students during distance education?